the rising air currents where the cliffs converge. Cloud banners have been known to hang over the mountain for hours and sometimes whole days at a time, though these clouds do not often have the appearance and form of a smoke column. A comparison between the altitudes of some common cloud forms and that of the summit of the mountain may be made by referring to figures 3 and 4, taken from the summit and from a spot about half-way up the southern slope, respectively.

A third possible explanation of the phenomenon rests on the fact that there are large patches of rock within the crater rim that are hot enough to vaporize any water that may fall on them. In figure 5, the black surface in the foreground is warm enough to keep the snow melted at all times. A hot surface of this kind lies almost directly under the cliffs forming the crater rim, and it is thought that if a snowslide should occur that would throw a large quantity of snow on that spot, the steam generated could be seen some distance. To the writer's knowledge, this has never been actually seen to occur, but the hypothesis seems plausible; and it is likely if ever such a thing really takes place, the snow slides down during the winter months when it is practically impossible to ascend the mountain.

THE MAKING OF FORECASTS BY LAYMEN.

[U. S. Weather Bureau, Washington, October, 1915.]

[The central office recently addressed the following remarks to the Weather Bureau personnel. We reprint them here because of their undoubted interest to the general public. The bureau desires to encourage the development of the art of forecasting and to stimulate the study of the subject throughout the country. So far as it is possible to transfer the forecasters' experience to paper, the Weather Bureau does so from time to time as is shown by the nature of various articles the bureau has published and expects to publish in the future. The following remarks are made solely in the interest of the public.—C. A., jr.]

No doubt many of the officials of the Weather Bureau have, from time to time in the past, aided in giving currency to the idea that every man can be his own forecaster. In a certain sense this becomes possible if there is some familiarity with the source of weather forecasting and if a weather map of recent date is available.

In view of the difficulties of accurate forecasting in the long run, however, it seems desirable not to encourage a too literal acceptance of the idea in question. Especially is this the case where the impression exists on the part of horticulturists, business men, and others who may have important interests at stake in connection with forthcoming weather conditions, that their own ability to forecast the coming weather is sufficient for their guidance in the conduct of their business or agricultural affairs.

The reasons for the caution here advanced, and which should be conveyed to those inclined to depend too largely on their own knowledge of the weather map, should be sufficiently obvious to the members of the Weather Bureau. Experience has already fully demonstrated that, while the recognized principles of weather forecasting are common property in so far as concerns the fact that they have been set forth in numerous publications, very few even among those who give their daily attention to the subject have developed exceptional skill in making the forecasts. Furthermore, the weather maps as issued—which must necessarily be the sole basis of an individual forecast—do not contain all of the information that has passed under the scrutiny of the official forecaster before he issues the forecasts and warnings. Not only at the district forecast centers, but to a larger extent at the Washington office, there are prepared supplementary charts covering the changes in pressure and temperature within a given preceding period, etc., which play their part in the final determination of the forecast issued.

It will thus be readily seen that, whatever may be the justification for an individual to attempt to make his own deductions from the weather map with reference to his particular interests, it will be much better for him to place his reliance upon the official forecasts and information issued by the Weather Bureau. These considerations justify the Weather Bureau in discouraging the idea that satisfactory forecasts can be made by anyone merely because he possesses a fair knowledge of meteorological laws.—*C. F. Marvin, Chief of Bureau.*

PROFESSOR CLEVELAND ABBE.

[U. S. Weather Bureau, Washington, D. C., Dec. 3, 1915.]

The news that Professor Cleveland Abbe has been under the necessity of taking an extended leave of absence on account of ill health will be received with regret not only by his coworkers in the Weather Bureau, but throughout the scientific world.

Professor Abbe [who is now just 77] has had 44 years of distinguished service in the Weather Service and Weather Bureau of the Government. Through his exexcellent work and eminence in the application of meteorology he has come to be regarded as the "dean of the Weather Service." During this period he has been indefatigable in the pursuit of his favorite branch of science, while his enthusiasm served to enlist the interest of a number of young students who later made their mark in the development of meteorology as a science.

Professor Abbe's long and able editorship of the MONTHLY WEATHER REVIEW and his numerous contributions to meteorological science are well known to the members of the Weather Bureau, as well as to meteorologists the world over, all of whom will wish for him a complete recovery and an early return to the congenial duties in which he has been engaged for so many years.

The above was recently communicated to the personnel of the Weather Bureau, but is also of interest to other readers of the REVIEW.—C. A., jr.

PENNSYLVANIA WEATHER AND CLIMATE IN 1682.

William Penn, founder of the State of Pennsylvania, first trod the soil of the land on the Delaware, granted him by Charles II of Britain, on October 28, 1682. Before this time he had actively agitated the advantages of country life and of emigration to the New World, had drafted a form of government for his colony, and had actually sold as much as 600,000 acres of his grant to prospective settlers. Numerous settlers had preceded Penn, a multitude accompanied and immediately followed him; and by the time he wrote the *Letter* quoted below, settlements dotted the rivers several miles inland. Along the Delaware River settlements reached from Lewes to above the Falls at Trenton, and shortly before writing the *Letter* Penn had made a general tour of his lands so that he had freshly in mind full information from his own observations.

The original draft of the *Letter* is preserved by the Historical Society of Pennsylvania. Published versions